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The fall of employment in the manufacturing sector

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Before examining the factors that have led to job losses, the authors discuss two periods that saw manufacturing employment fall sharply—1980 to 2000 and 2000 to 2017. Two million jobs were lost between 1980 and 2000 and 5.5 million jobs were lost between 2000 and 2017. The authors note that these losses have affected the employment rates of prime age workers, finding that a "10 percentage point decline in the local manufacturing share reduced local employment rates by 3.7 percentage points for prime age men and 2.7 percentage points for prime age women."

What is most responsible for the manufacturing job losses? Rising trade with China is often cited as a possible culprit. But competition from China only accounts for about a fourth of the decline in manufacturing during the 2000s. This theory is further eroded by the fact that local markets that did not compete with Chinese imports also saw employment declines.

A skills mismatch—the gap between the skills workers have and the skills employers need—has also contributed to the decline of manufacturing employment. Using data from the Job Opening and Labor Turnover Survey, the authors saw job opening rates in the manufacturing sector nearly double, from 1.8 percent in 2001 to 3.1 percent in 2017. The construction industry—which generally employs low-skilled labor—only saw an increase of 0.17 percent over that same period (from 2.53 percent to 2.69 percent). The authors suggest this increase in job openings is due to a skills mismatch, causing job vacancies to remain unfilled for longer periods.

The decline of manufacturing is at least partly the result of a decline in cross-regional migration. In the past, individuals would move to take on a new job, causing the local population to change. Between 1980 and 1990, a 1.0 percentage point change in manufacturing share created a 4.0 percent change in population, while from 2000 to 2017, a 1.0 percentage point change in manufacturing share led to a 2.3 percent increase in population.

Prime age men and women with less than a high school degree have been hit particularly hard by changes to manufacturing employment. As the manufacturing sector has shifted from low-skilled to high-skilled work, workers who possess higher skill levels (e.g., engineers, computer programmers, software developers, etc.) have become more sought after than before. Between 2000 and 2017, as employment rates declined in the manufacturing sector, college educated men saw their annual work hours reduced by 7.4 percent, compared with a 0.7 percent reduction for college educated women. Men with a high school degree or less saw their annual hours reduced by 11.6 percent, compared with a 14.1 percent reduction for women with the same educational attainment.

The change in skills required to perform new tasks in manufacturing, along with import competition and a decline in mobility, have contributed to the decline of employment rate for manufacturing since 2000. This decline has been even more persistent than those of other periods, many of which saw an eventual bounce back.